



GEORGE ENGELMANN BOTANICAL NOTEBOOKS

*Pagination Note:
Since many of the items lack a specific
page number, the page number displayed
online refers to the sequentially created
number each item was given upon
cataloging the materials.*

5 hub

52

P. Sabiniiana

235-q



0 1 2 3 4 5 6 7 8 9 10

cm

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MISSOURI
BOTANICAL
GARDEN

11199

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



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cm

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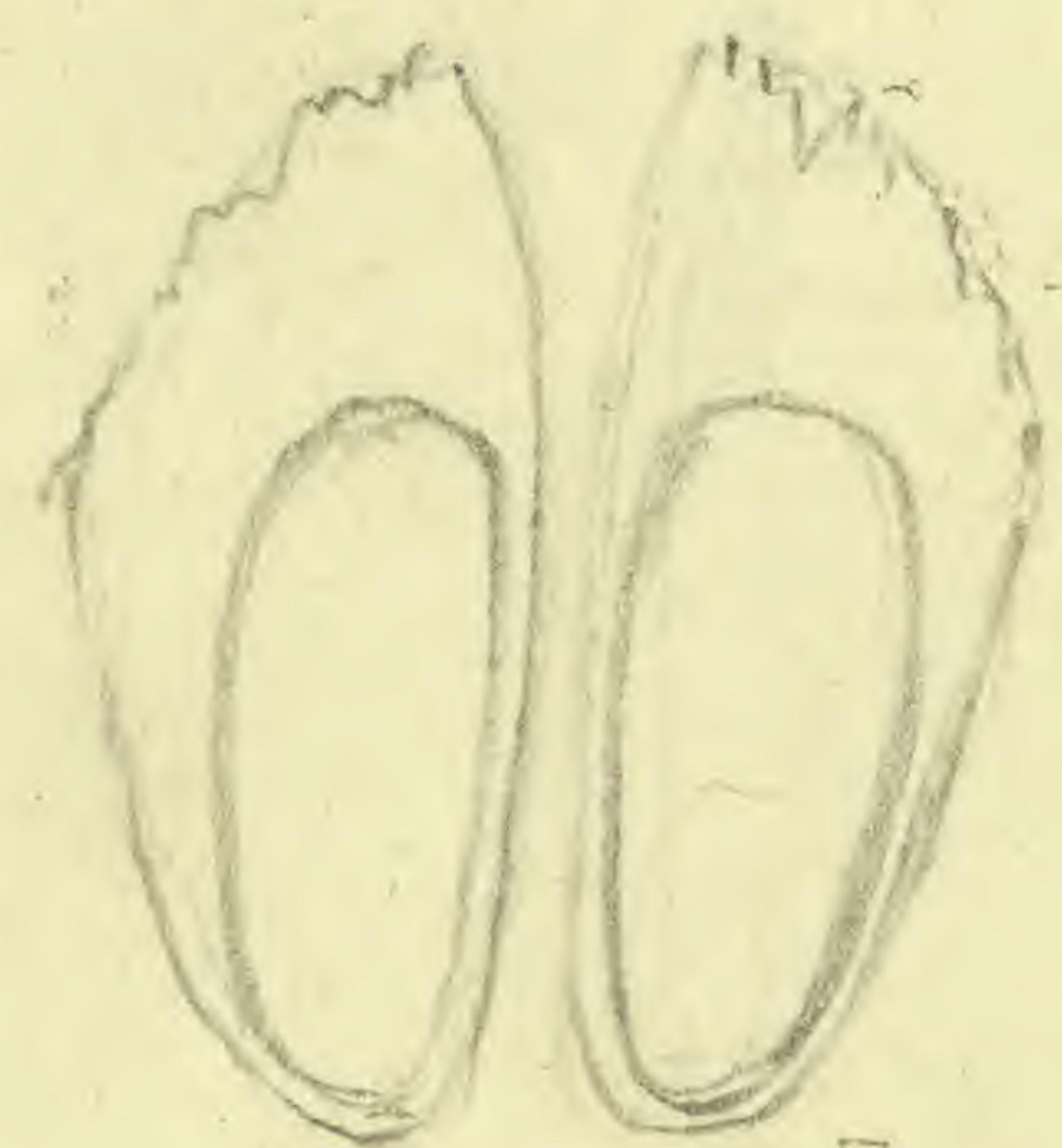
MISSOURI
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GARDEN

Pinus Sabiniana
Calif.

Nov 1862

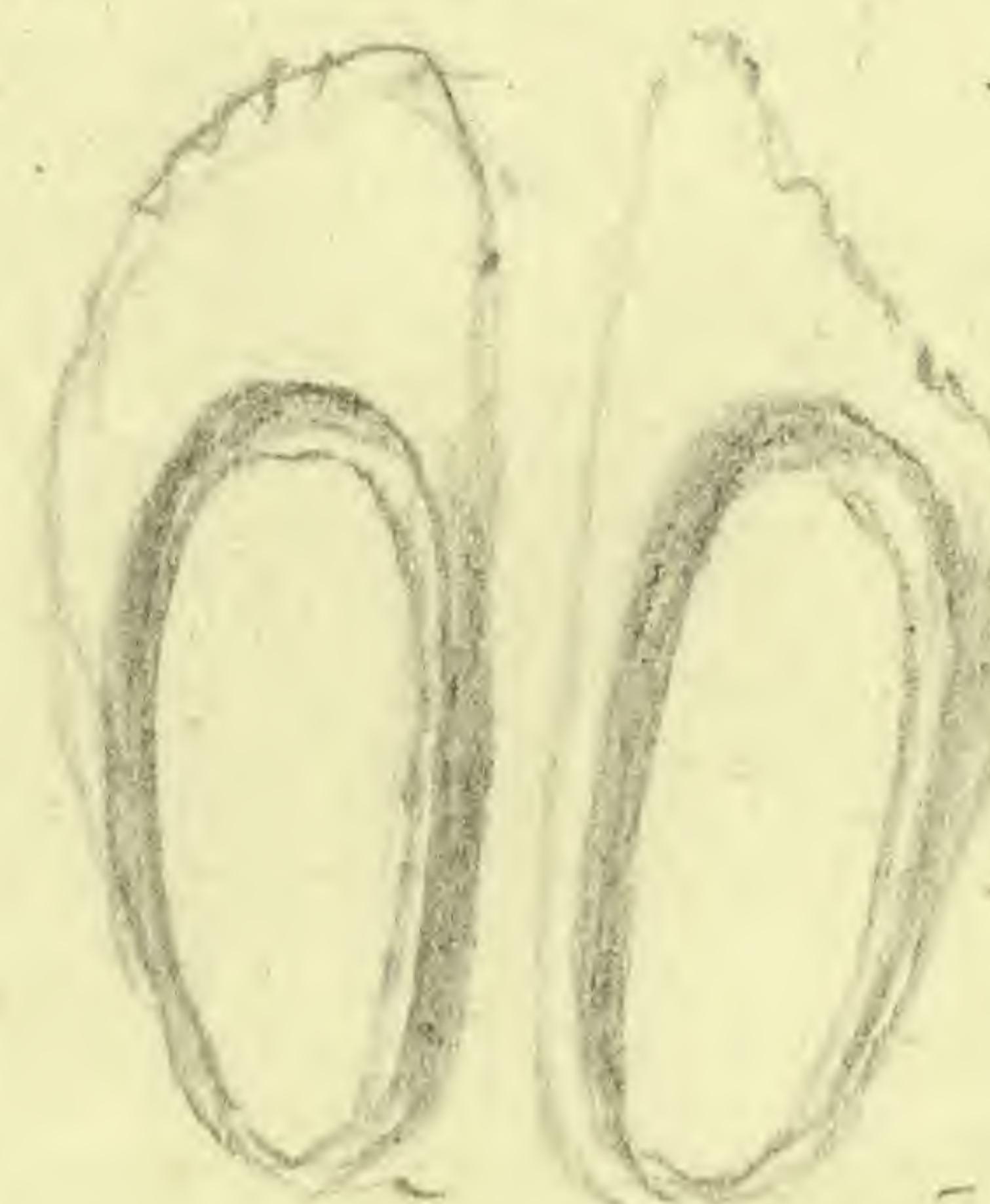
Dr Wm. J. Gray

Section
of wing

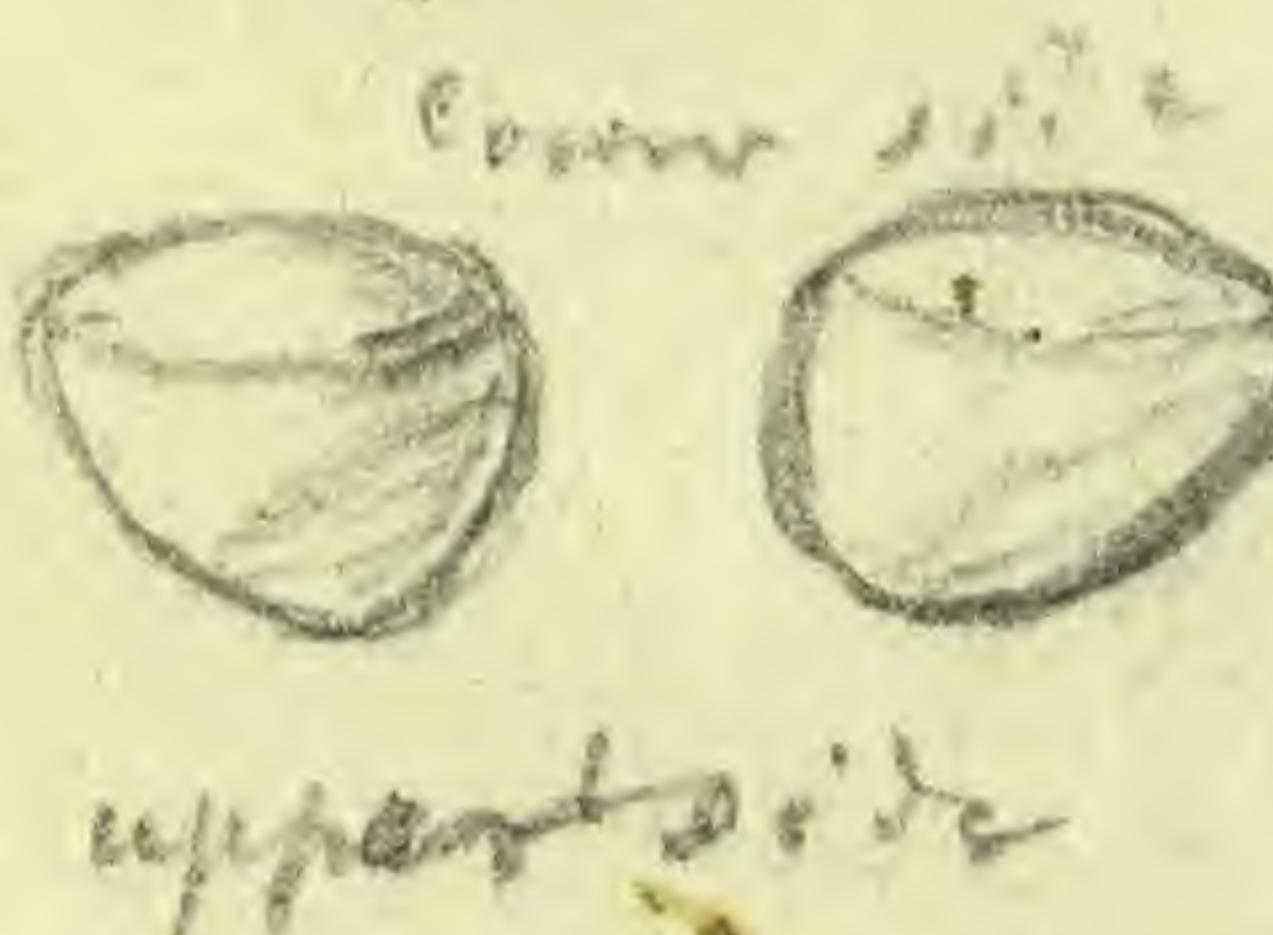


wings of seeds
of seeds, with
upper side
upward

Scal. of wing
x 4

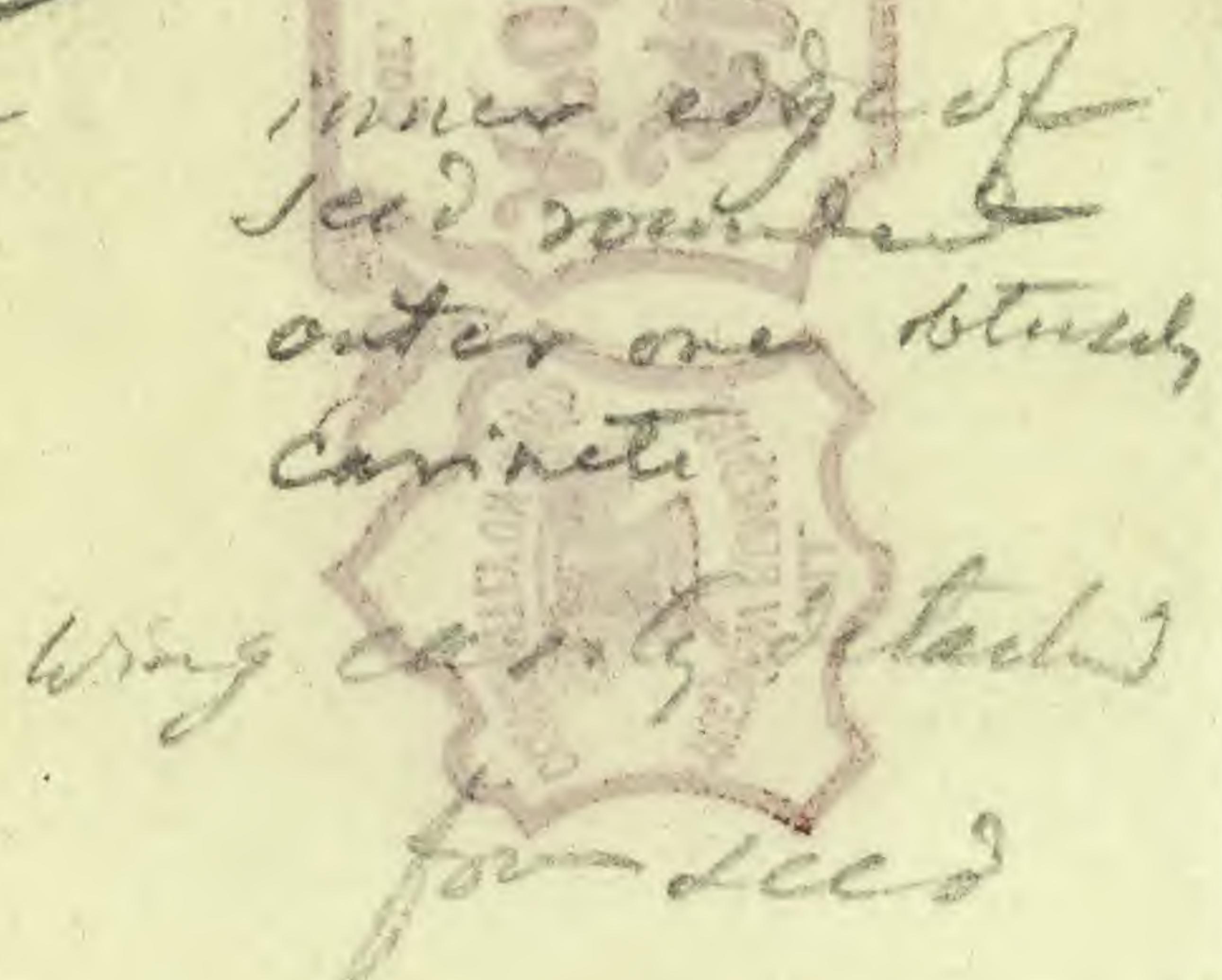


Different forms
of wings



lower side
turned to the
top of seed

inner edge of
seed wrapped
outer one bluish
carinate



Cone 8½ inches long

scales $\frac{34}{55}$ -arranged



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cm

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March 1865

longest diameter of Pollen x615

P. Sabiniina

Bolander's Leg April 1864

~~11~~ = 0.040 - 0.046 mm mostly 0.043 - 0.044



MISSOURI BOTANICAL GARDEN
DEPARTMENT OF BOTANY



MISSOURI
BOTANICAL
GARDEN



0 1 2 3 4 5 6 7 8 9 10
cm

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11201

LEITCH & CORRIES,
DRUGGISTS,

South-West Corner of Fifth and Market Streets,



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cm

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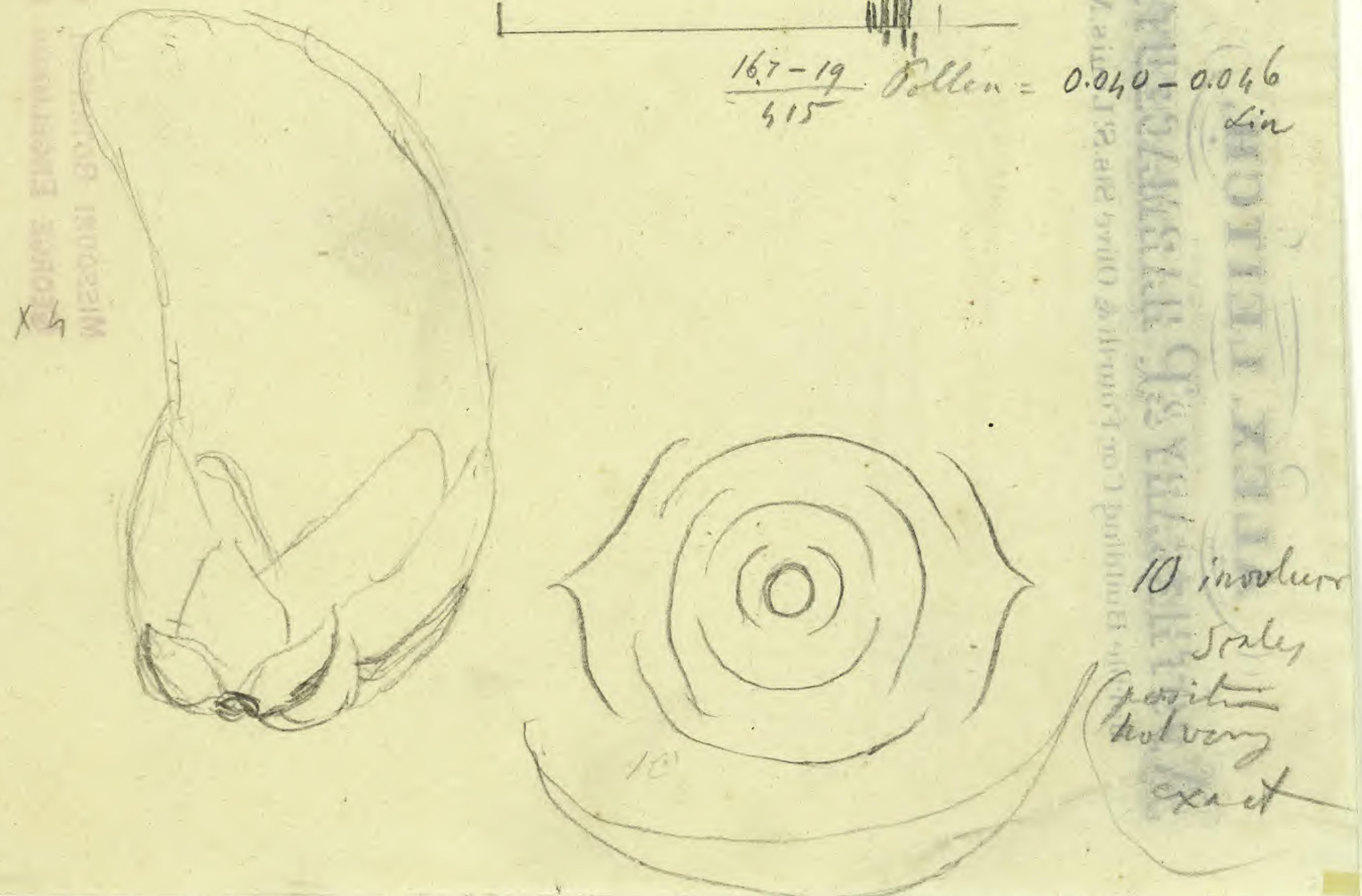
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GEORGE ENGELMANN PAPERS

Pinus Sabina ?

23 April 1865

No. 563 Calif. State Survey



10 involure
scale
(positive
tolerance
exact)



0 1 2 3 4 5 6 7 8 9 10

cm

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BOTANICAL
GARDEN

11202

ALEX. LITTCII.
APOTHECARY & CHARMACEUTIST.

Marble Building Cor. Fourth & Olive Sts. St. Louis Mo.

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cm

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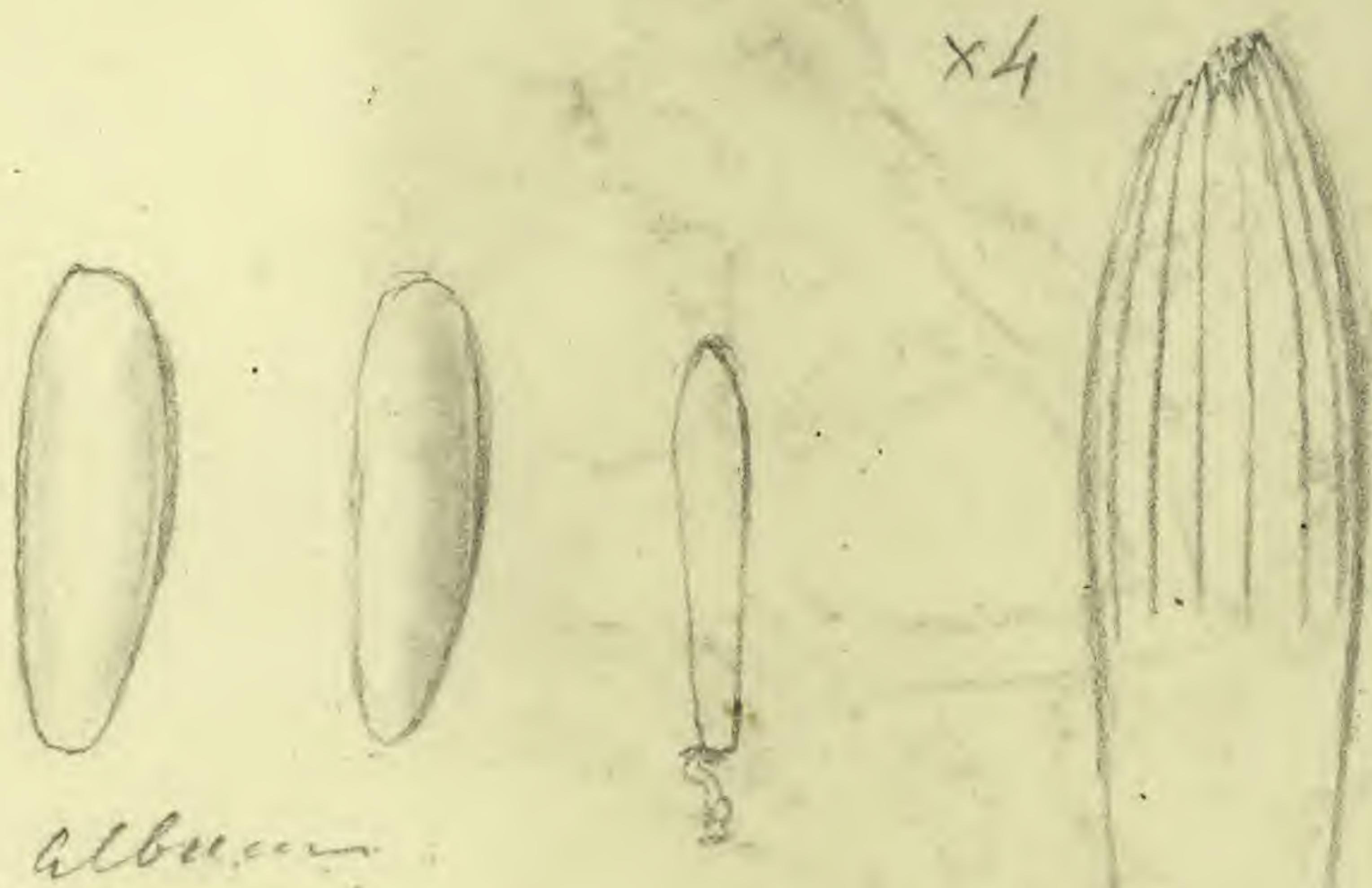


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Pinus Sabina

April 23. 1865

Gardiner 1851



1 embryo with 15 cotyled.
1 - - 16 -

cotyledons remarkably
unequal.

very long
longer than twice the largest
diameter of embryo
more than $\frac{1}{3}$ the length of the embryo



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cm

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cm

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Poa Sibiriana

May 5 1878

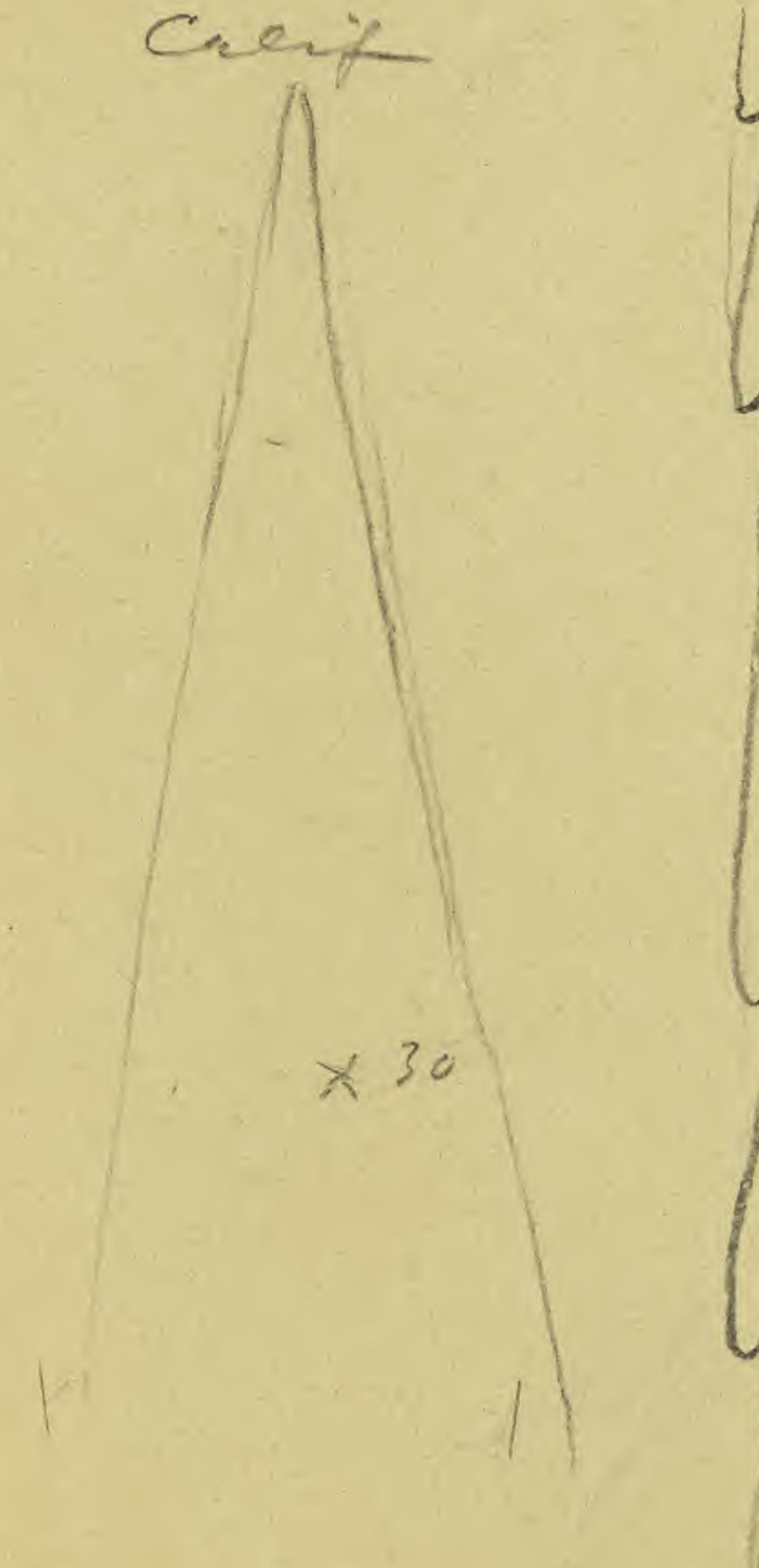


hypoderm on edges, and
in broader areas
th leaf - , also within sheath
no hypoderm on ducts

Calyx

x30

x60



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cm



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GARDEN

11204

HENRY T. BROWNING,⁹

APOTHECARY.

No. 2600 Locede Ave., S. W. Cor. Jefferson Ave.,
ST. LOUIS, MO.

No. Date,

187

Al



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GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Geo. Engelmann, M. D.,

No. 3003 Locust Street

7 tub

53

P. Coulter

240-6



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cm

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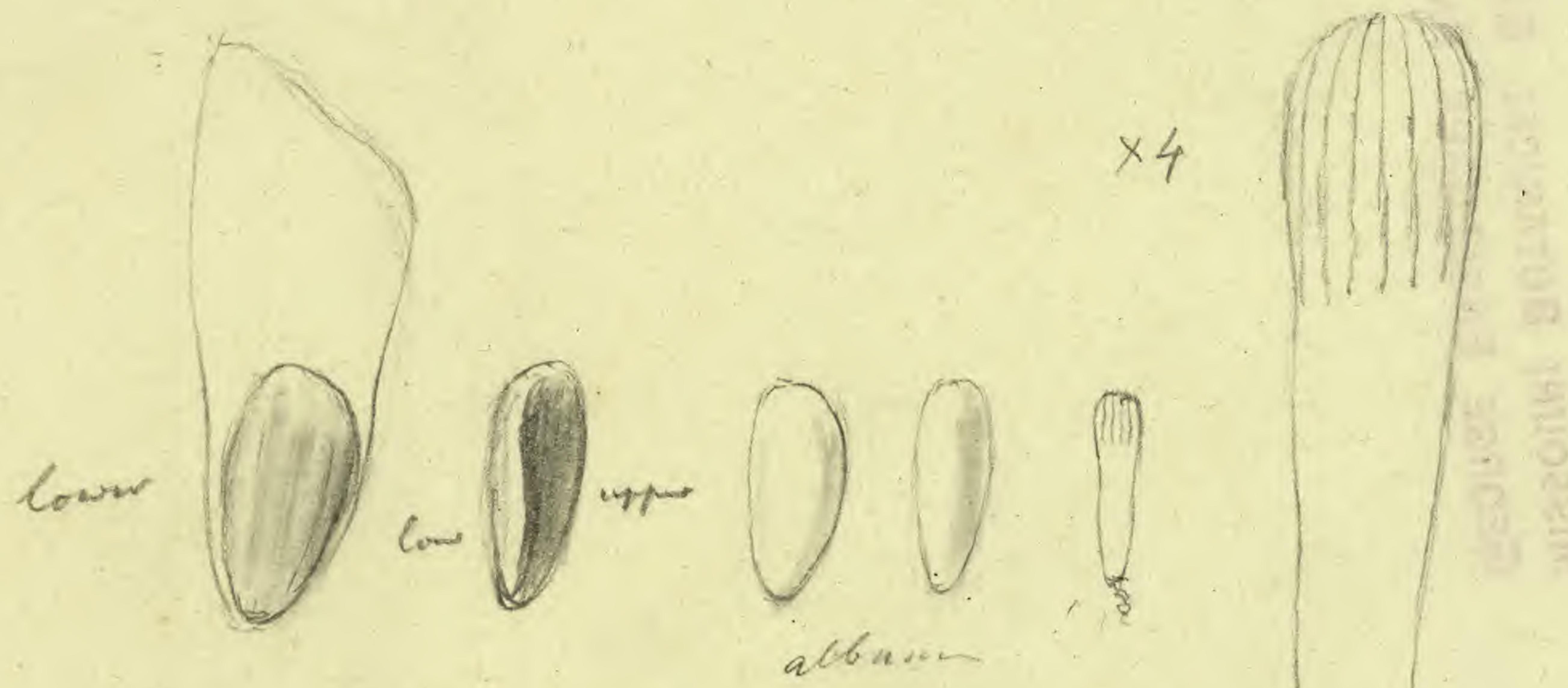
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Pisces Coulteri Don
Boland mi 1865-

April 23 1865



2 seeds with 14 Cotyl

1 - - 12 -

2 - - 11 -

length of cotyledons $\frac{1}{2}$ the thickness of
cotyls
more than $\frac{1}{3}$ of length of Embryos



0 1 2 3 4 5 6 7 8 9 10

cm

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APOTHECARY & PHARMACEUTIST.

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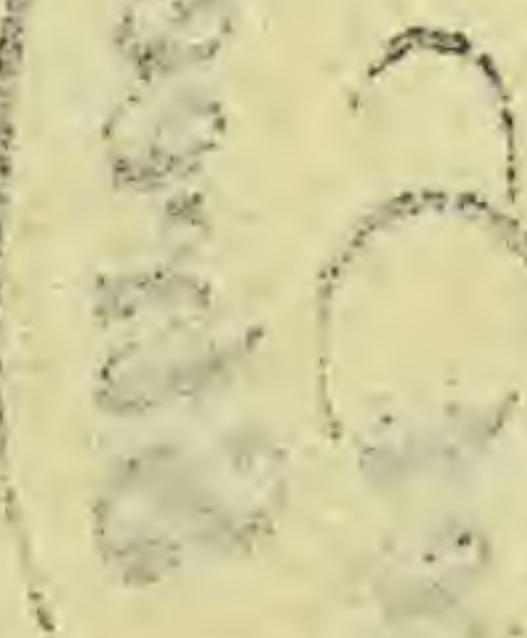
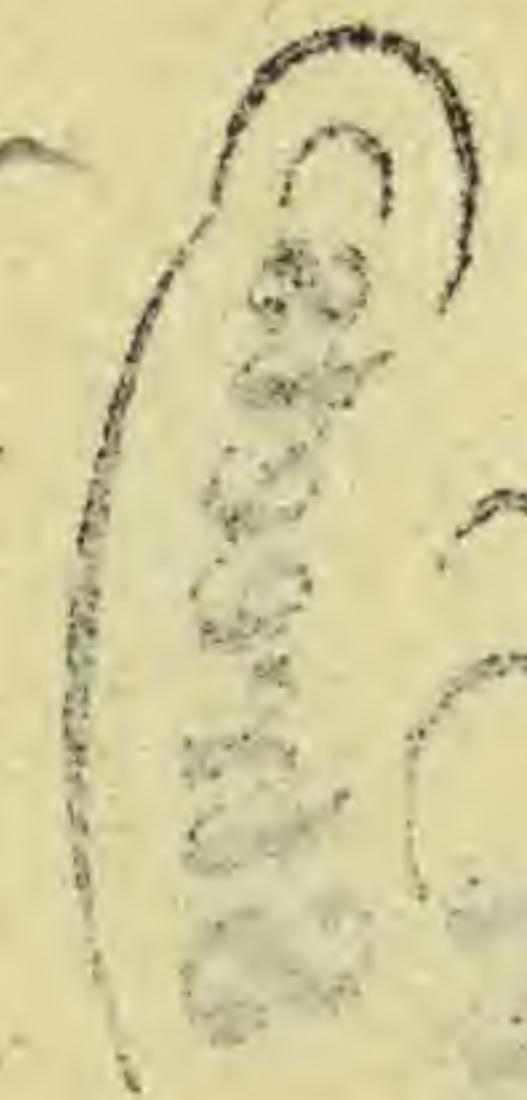
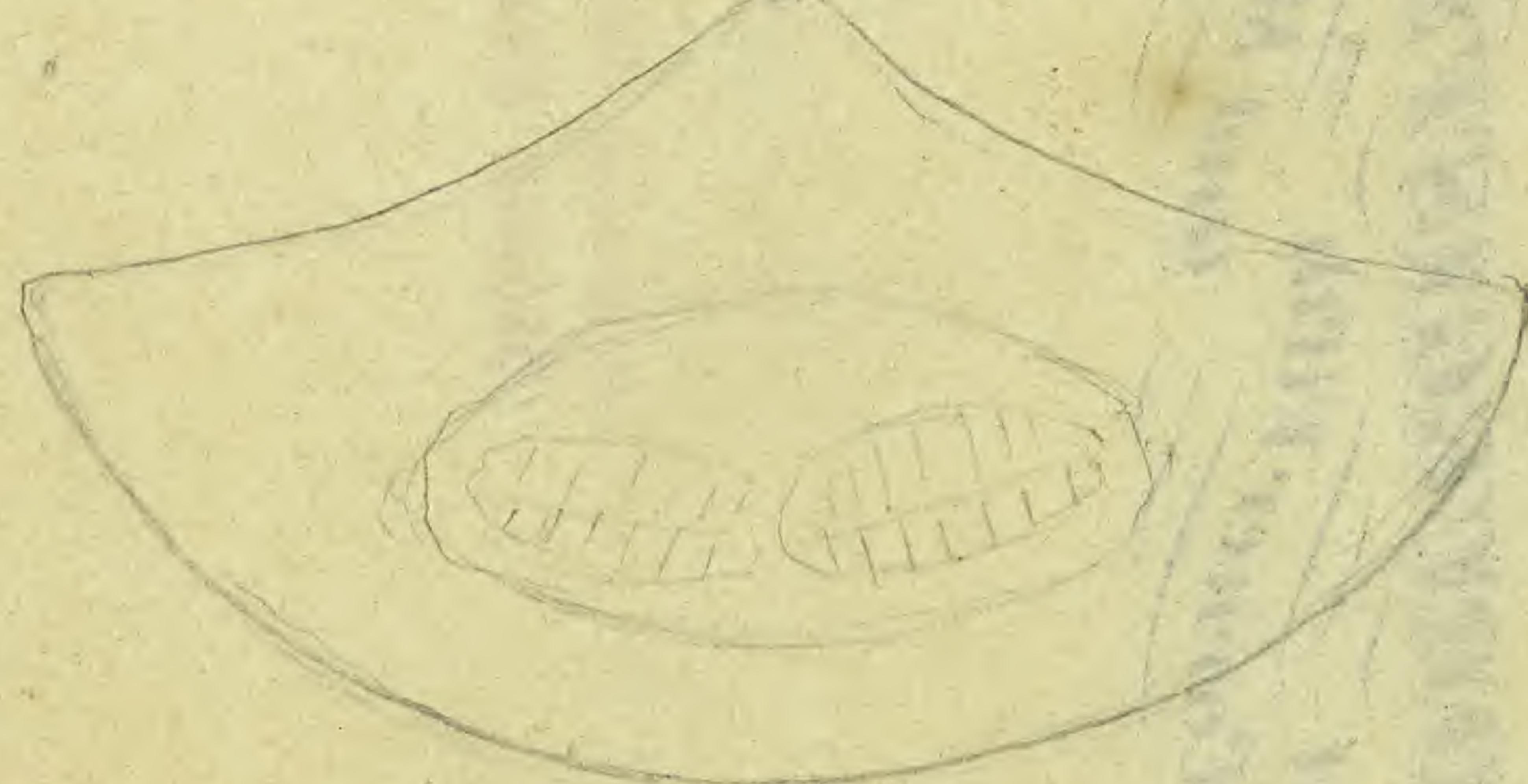
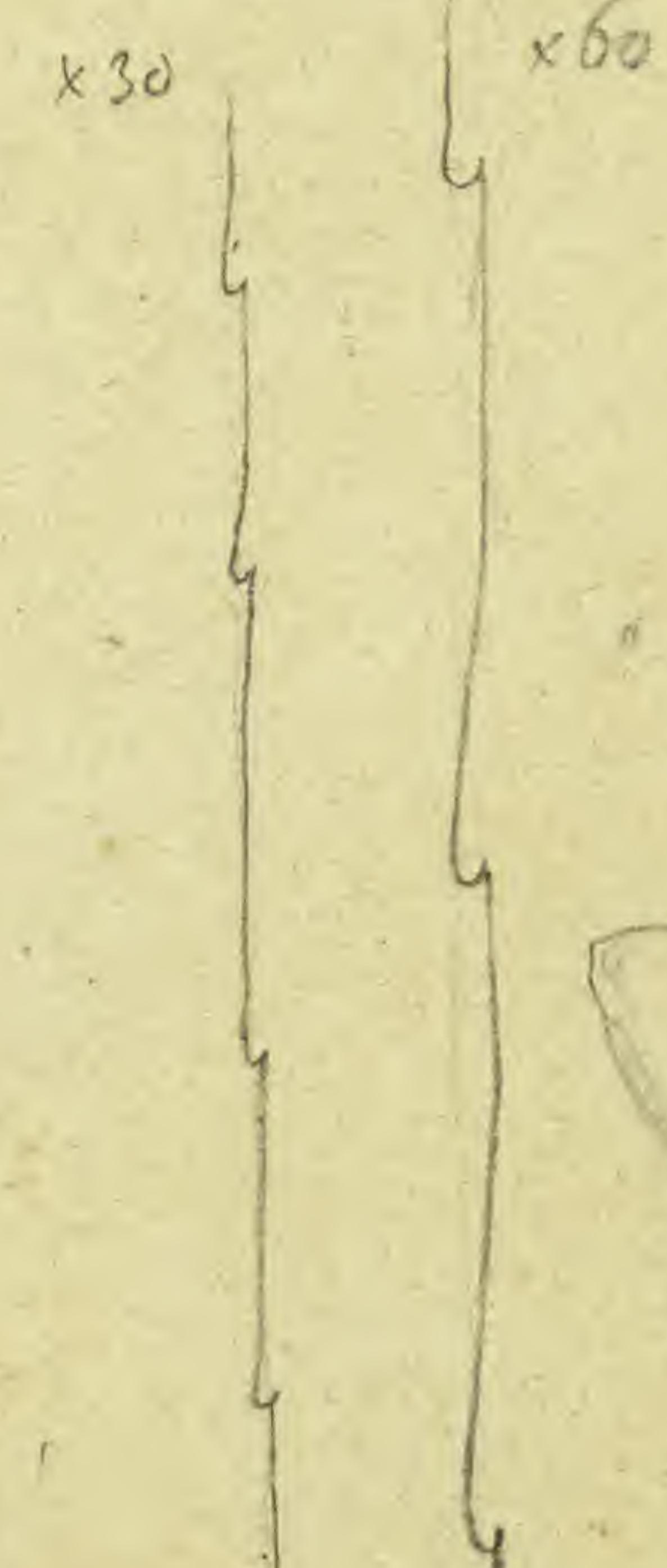
Pinus Coulteri

April 1st 1871

form *canariophylla*

Monte Diablo, Solano Co.

largest leaves 13" long and 1" wide.



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cm

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Leitch & Corlies
Chrysanthemums
West Fifth Corner and Market Streets
South West Corner Fifth and Market Streets

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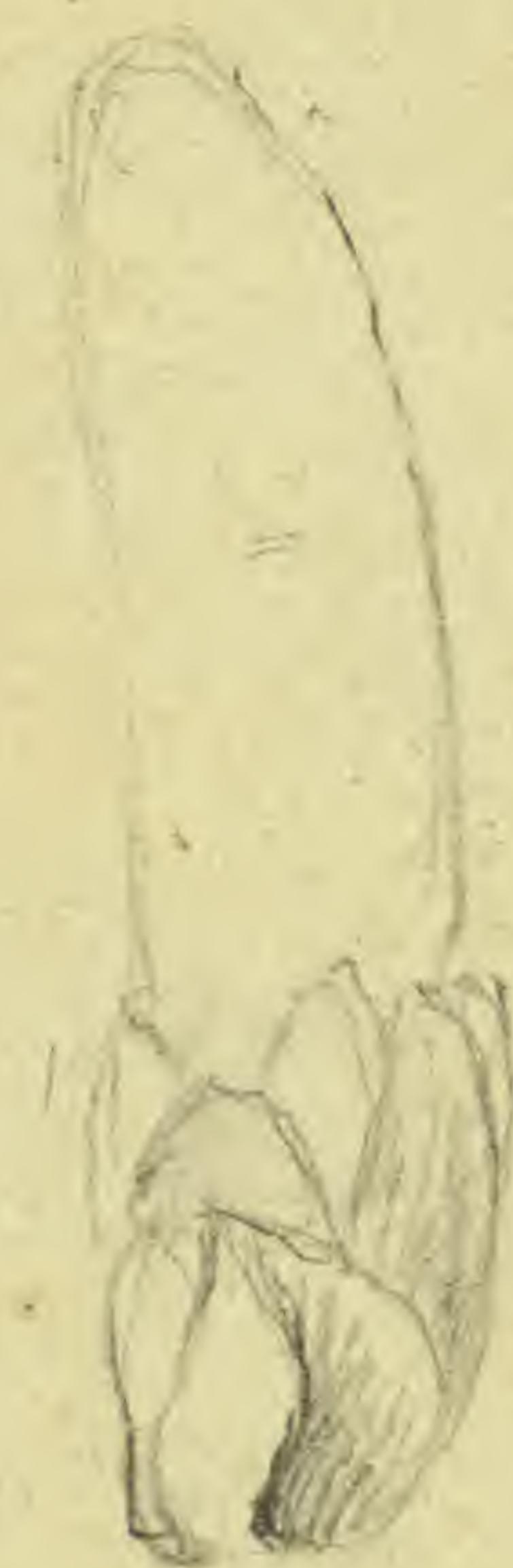
Pinus Coulteri

April 2. 1871

few Pollen grains seen, adhering to involucrum

monte Trabla, Bolandia
belonging here?

$\frac{35}{415}$ and $\frac{40.5-42.5}{415}$



anat 18-20 long
involucr. 8 long

tong



Anthers x 10



8-10 involucral scales
2 outer ones half as large as
inner ones, or larger,
upper outer rounded
lowest outer linear-oblong



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cm

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Leitch & Corlies
DRAWINGS
West Fifth Market and Market Streets
South West Corner

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cm

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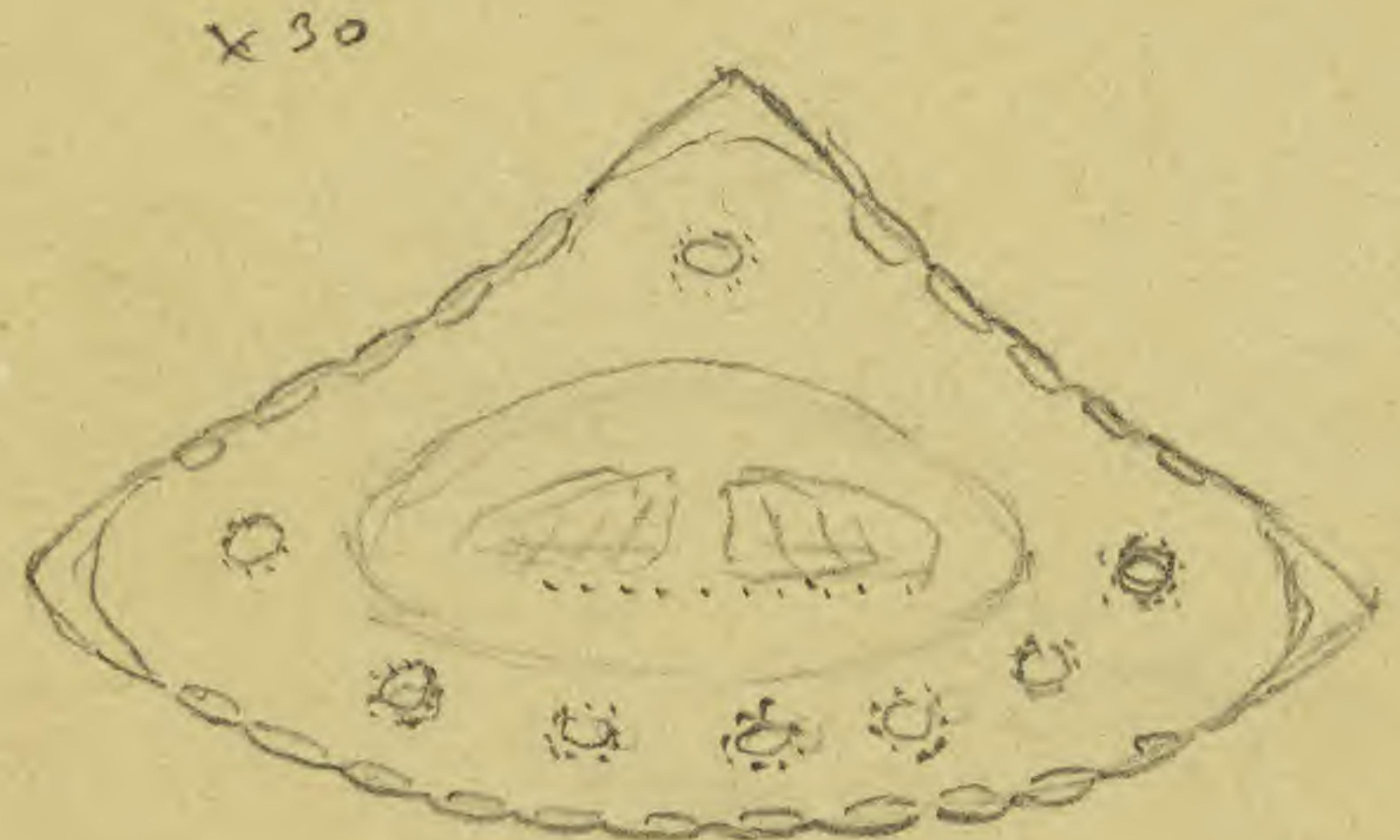


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Pinus Coulteri

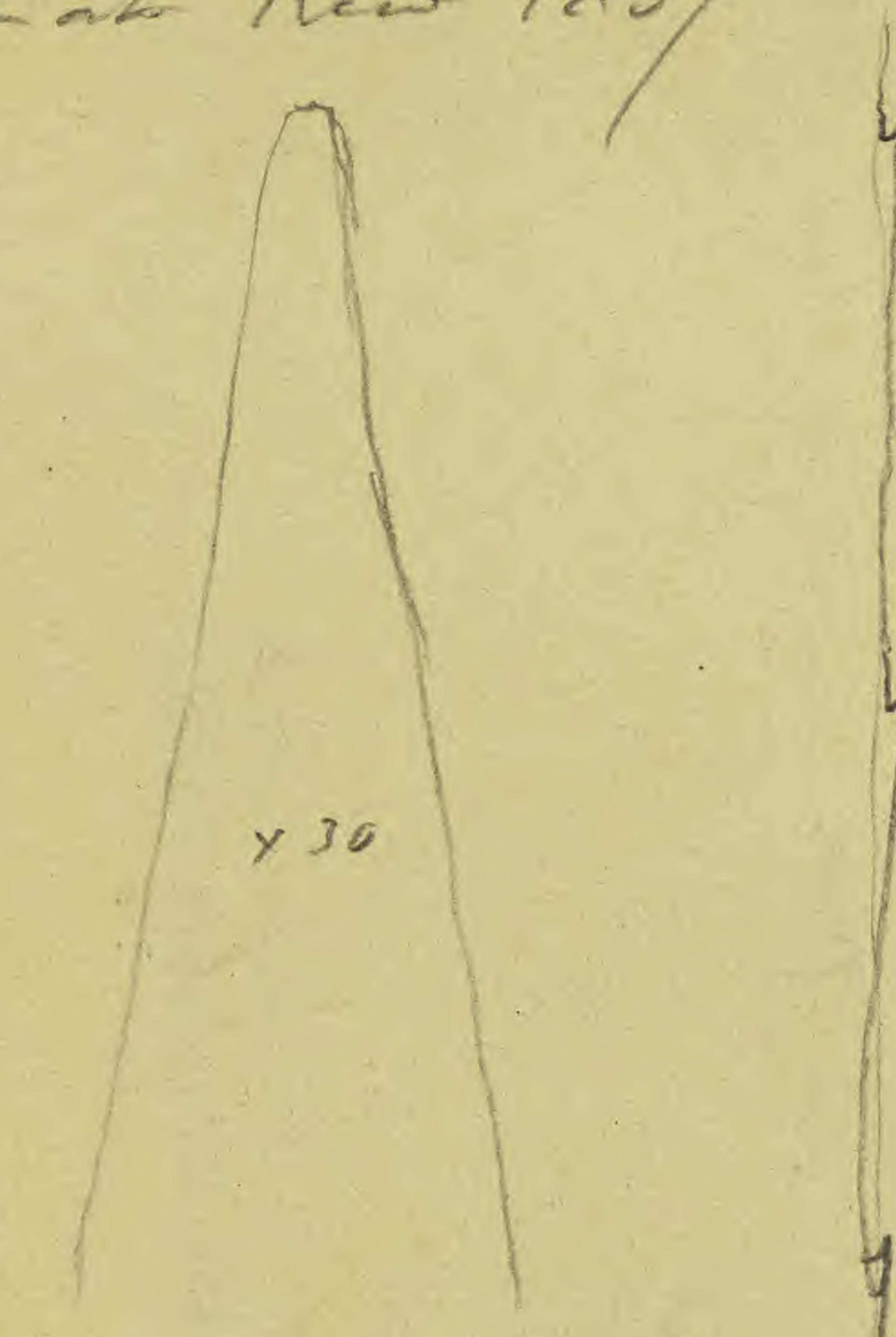
cult at Kew 1857

May 4 1878



6-8 units, all surrounded
by hyphae in cells
and then distinguished from
the native plant

x30



x60



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cm

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HENRY T. BROHILFIN CO.

APOTHECARY.

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No.

Date, 187

ff

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Geo. Engelmann, M. D.,

No. 3003 Locust Street

P. Coulteri

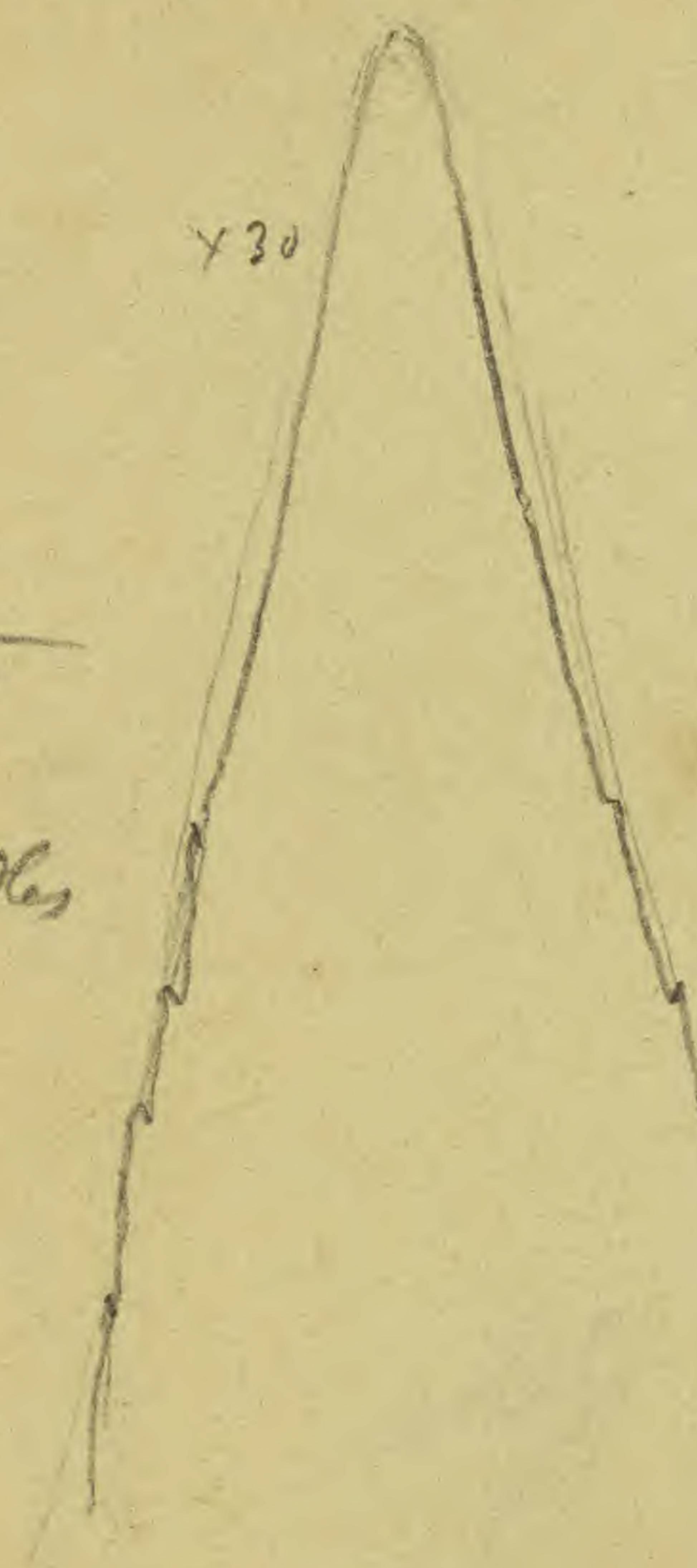
May 28 1878

Brewer No 136

x30



x30



x60



Sometimes a few hypoderm cells on ducts

Ducts 2, 3 or 4

Hypoderm cells above and below cambium

large & stout Coulteri (from Moore)

has only 2 ducts
and more pointed leaves



0 1 2 3 4 5 6 7 8 9 10

cm

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Geo. Engelmann, M. D.,
No. 3003 Locust Street

APOTHECARY,

No. 2600 Laclede Ave., S. W. Cor. Jefferson Ave.,
St. Louis, Mo.

No.

Date,

187

GE

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS



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Pia Coulteri

June 4 1879

Tally's Ranch, San Diego Co

D. Palmer 1875

x30

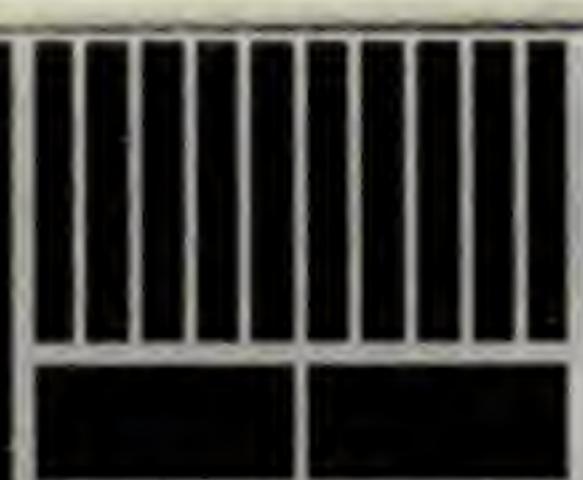


usually 4 paranchymatous ducts
sometimes more
surrounded by hypoderm, but
sometimes sparingly

x60



29



0 1 2 3 4 5 6 7 8 9 10

cm

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-11211

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H.

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GEORGE ENGELMANN PAPERS



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6 tab

54

P. insignis

247-52



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cm

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1/212

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cm

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Tiara insignis Bifolia

May 14 1878

x60
leaves 1.9 - 2.0 mm wide
Guadalupe Island. D. Palmer N.P. 90

x 30



about 8 layers of bundles of hypon-

above, 10 below. no other inside

of leaf (on ducts or within sheath) ducts parenchymatous, lateral; regular

section of young, half

grown leaf with indistinct

Central, parenchymatous

ducts and occasional

one or two close to sheath!



0 1 2 3 4 5 6 7 8 9 10

cm

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No. 3005 Olive Street,
Near Garrison Av. ST. LOUIS.

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GEORGE ENGELMANN PAPERS

Prescribed by

DR. GEO. ENGELMANN,
N. W. Cor. Garrison Ave. & Locust St.,



0 1 2 3 4 5 6 7 8 9 10

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Pin insigonis

May 14 1878

Bolander, Monterey 1865?

x30 turnite carp

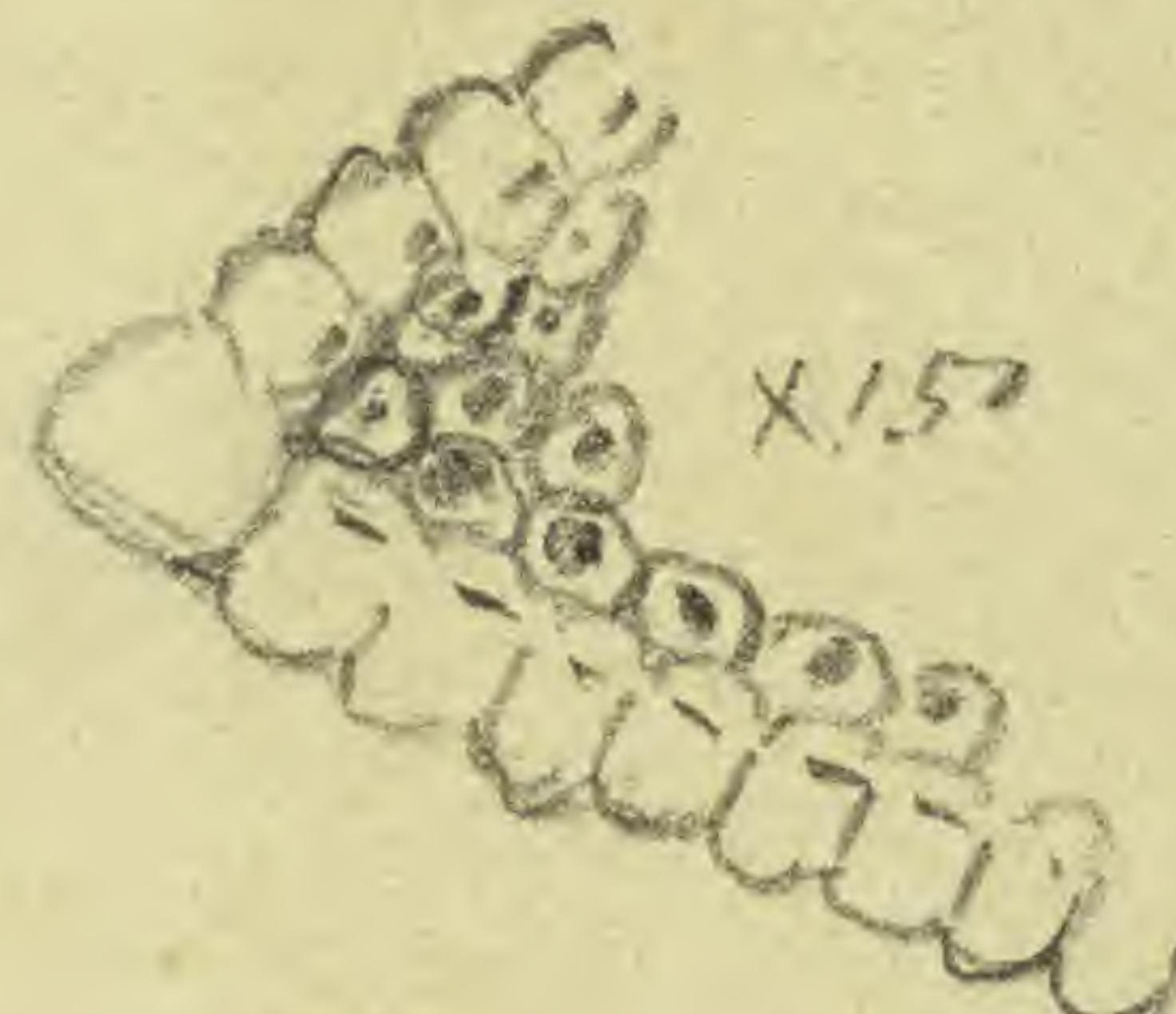


leaves 1.2-1.3 "^{mm} wide

turnite leaf



interrupted layers of hyphae cells
but no ducts seen.



x30



Brewer, Monterey 1827



0 1 2 3 4 5 6 7 8 9 10

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Near Garrison Av. ST. LOUIS.

P
Prescription Store,
Dr. Geo. Engelmann, Proprietor

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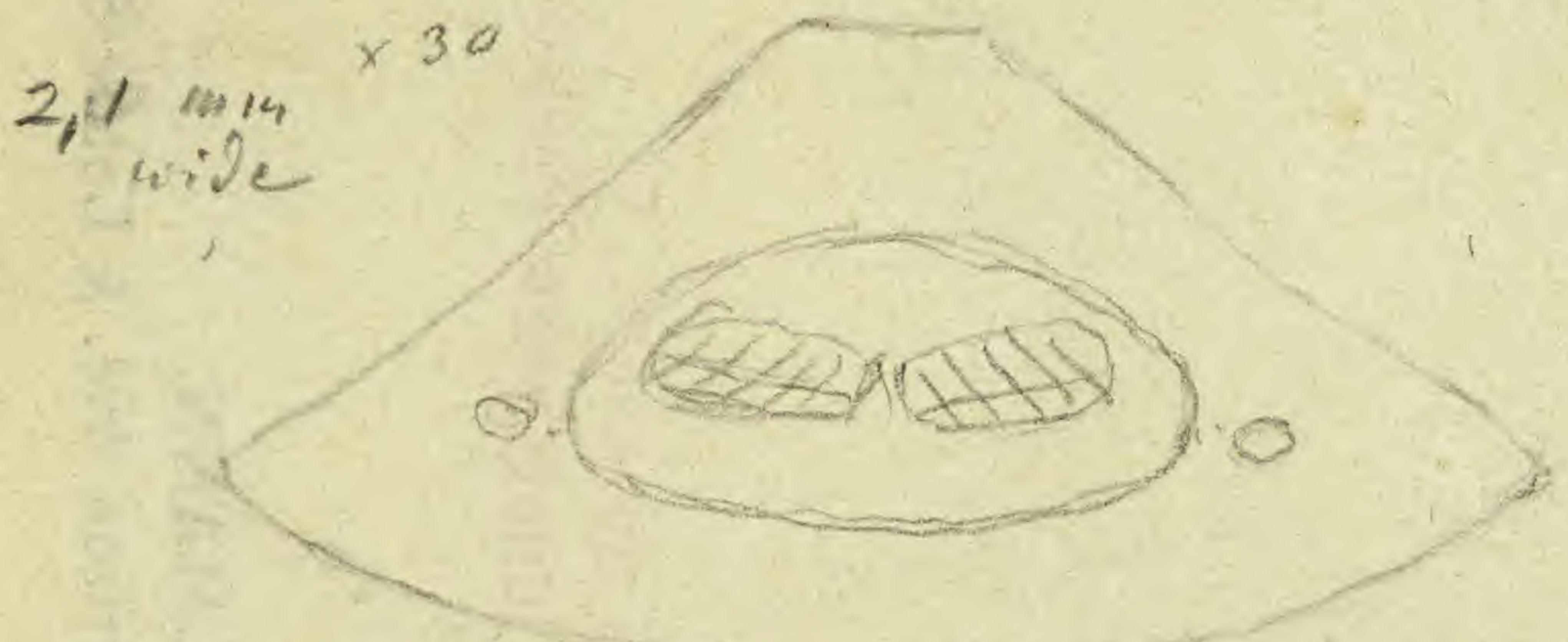


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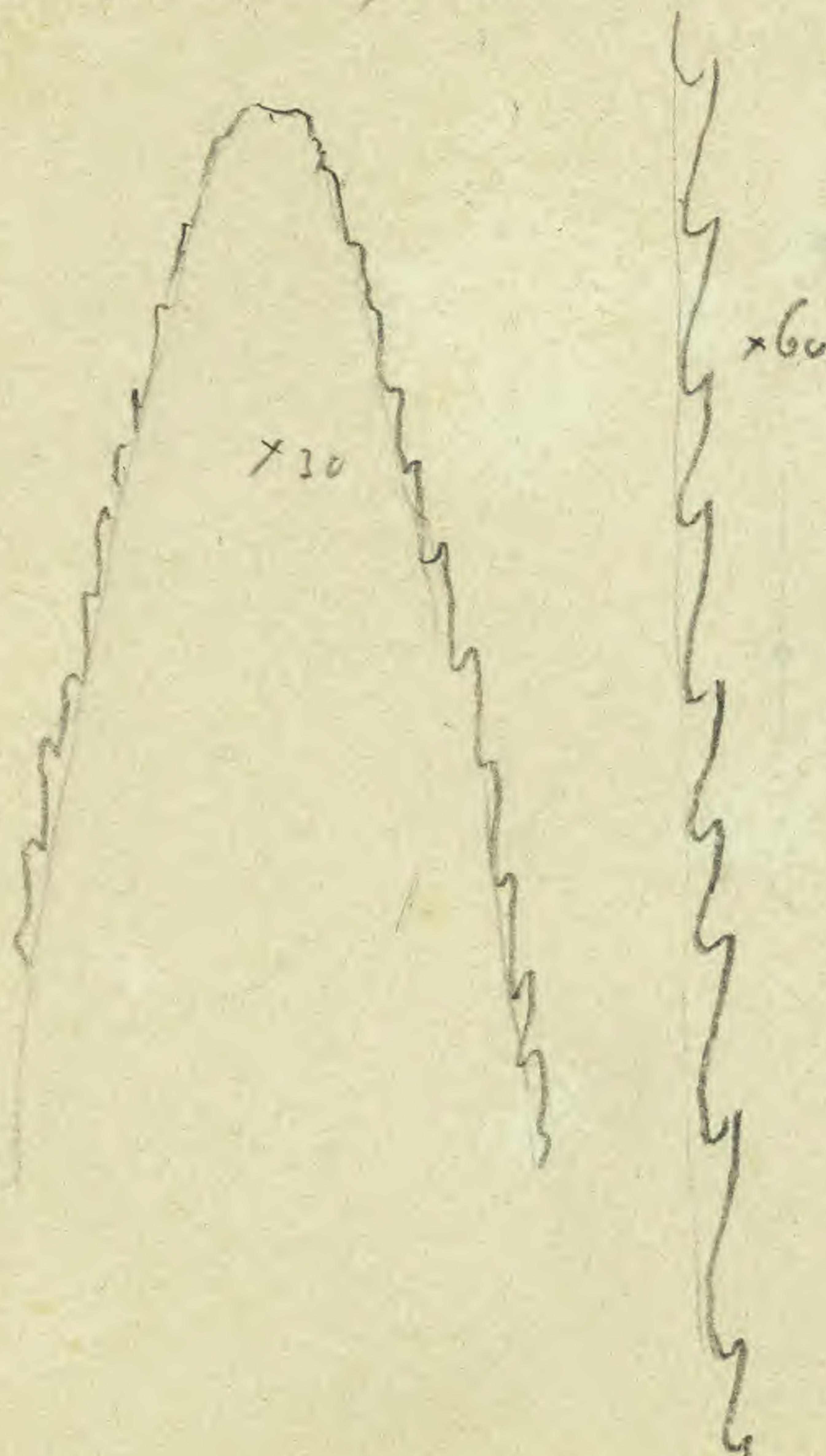
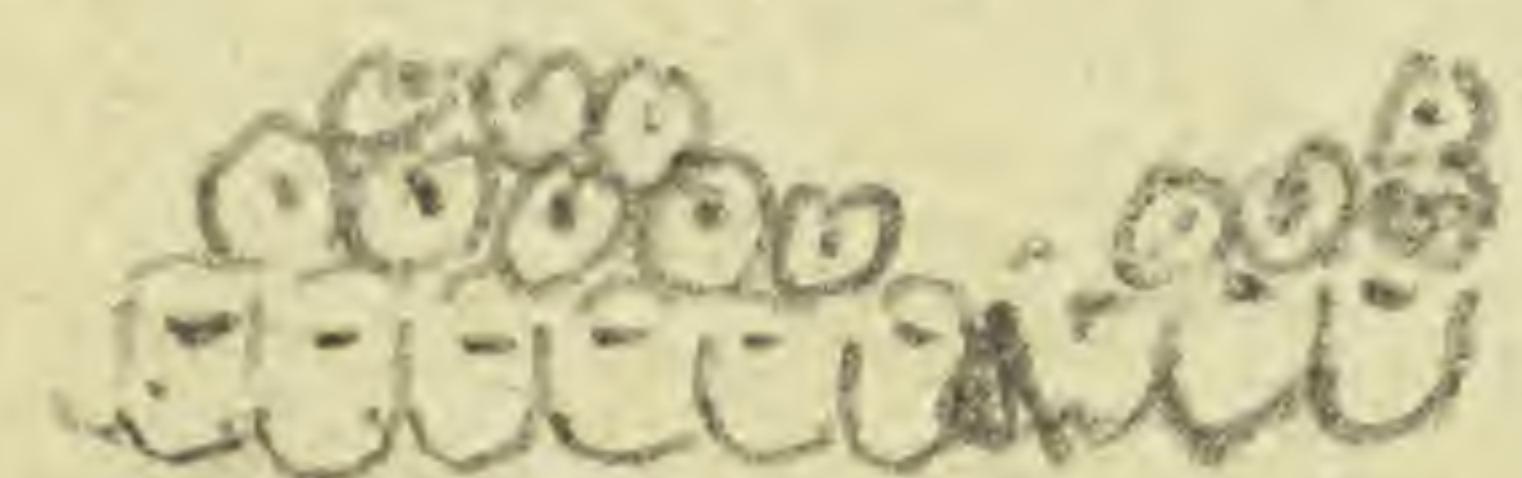
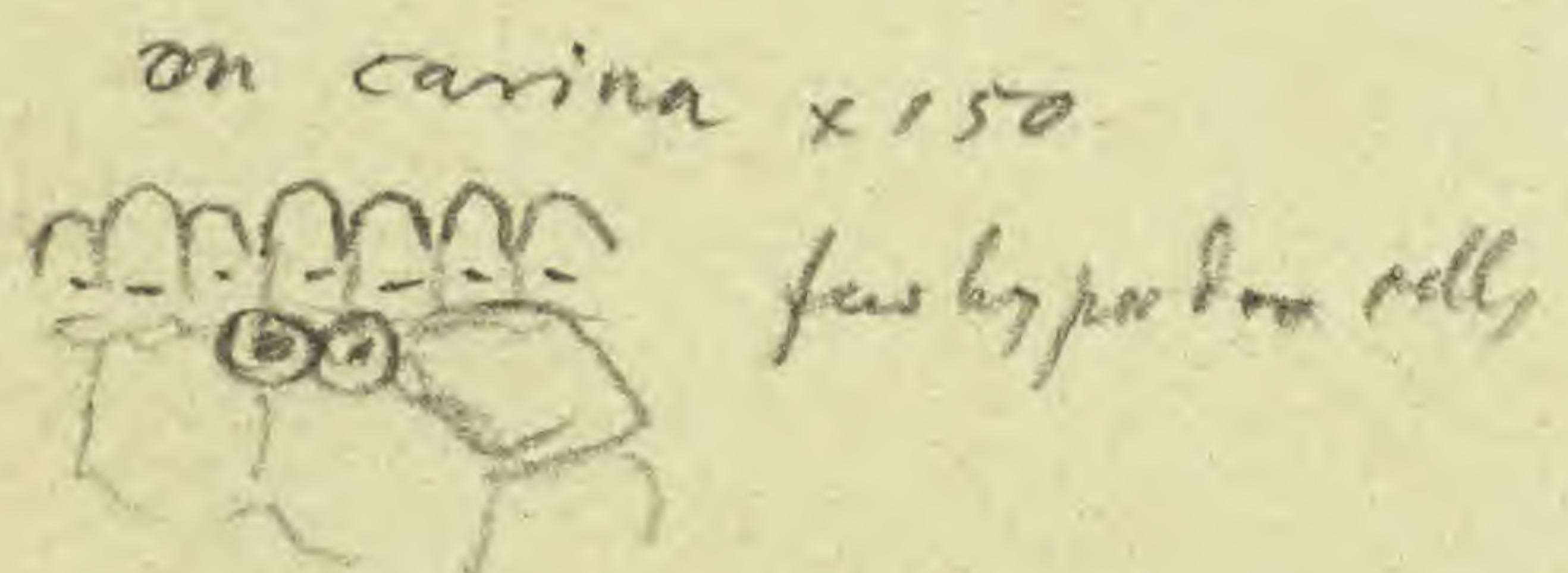
Pinus insignis

May 14 1878

Hot Throst, Antelope



Ducts not always distinct



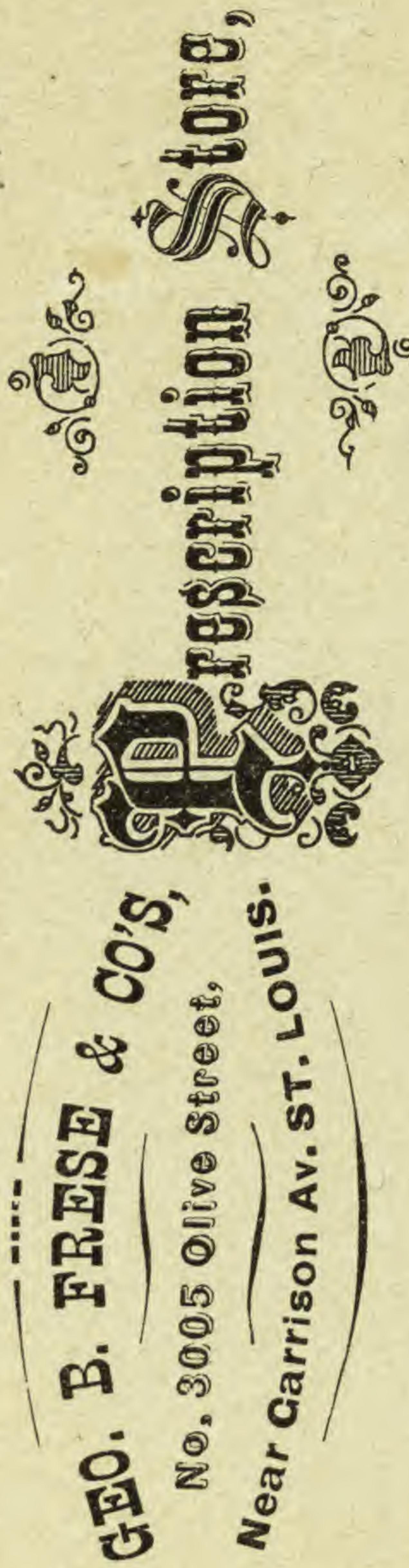
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cm

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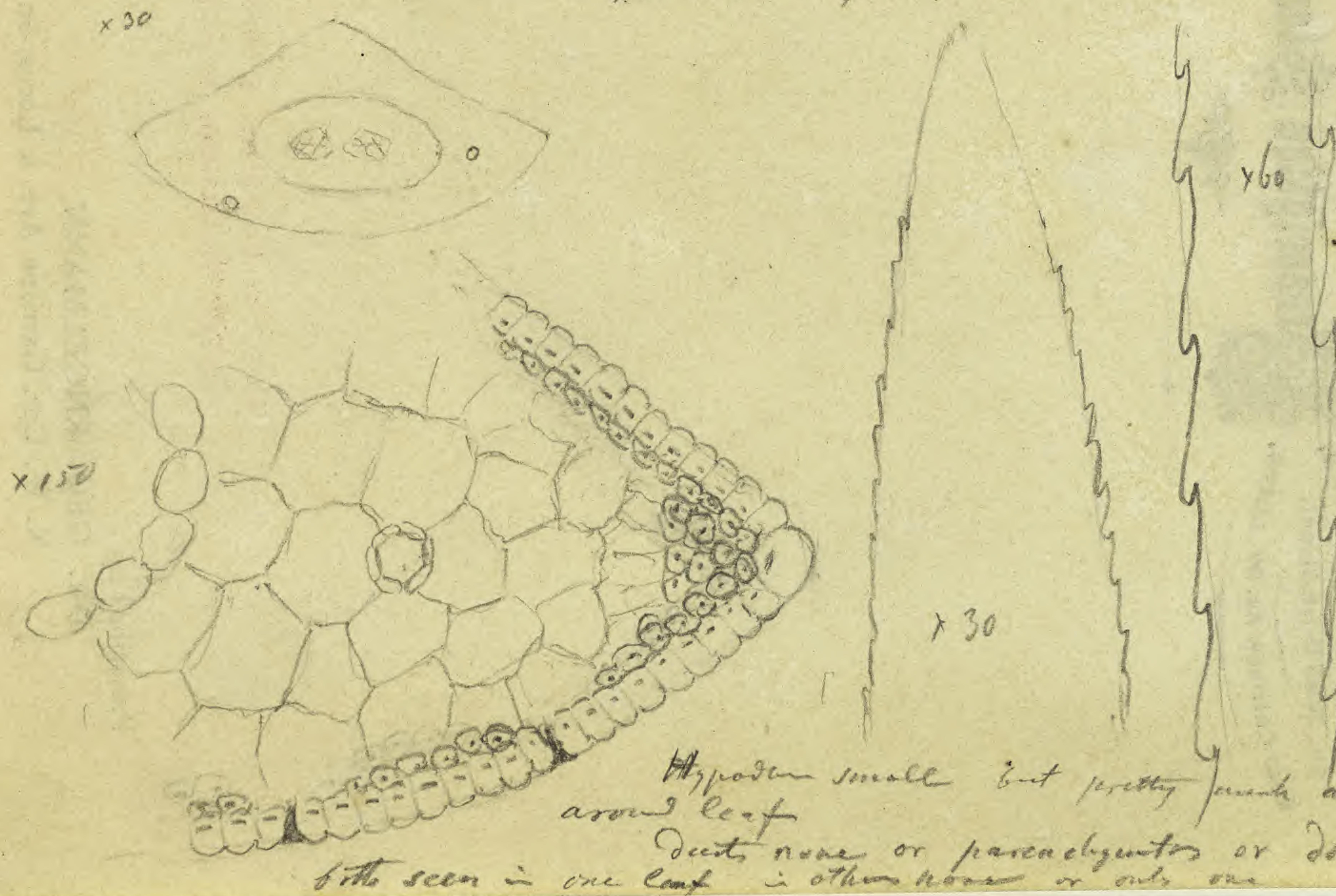
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Picea sitchensis
fertile tree, Dogwood Park 186a

May 14 1878



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cm

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